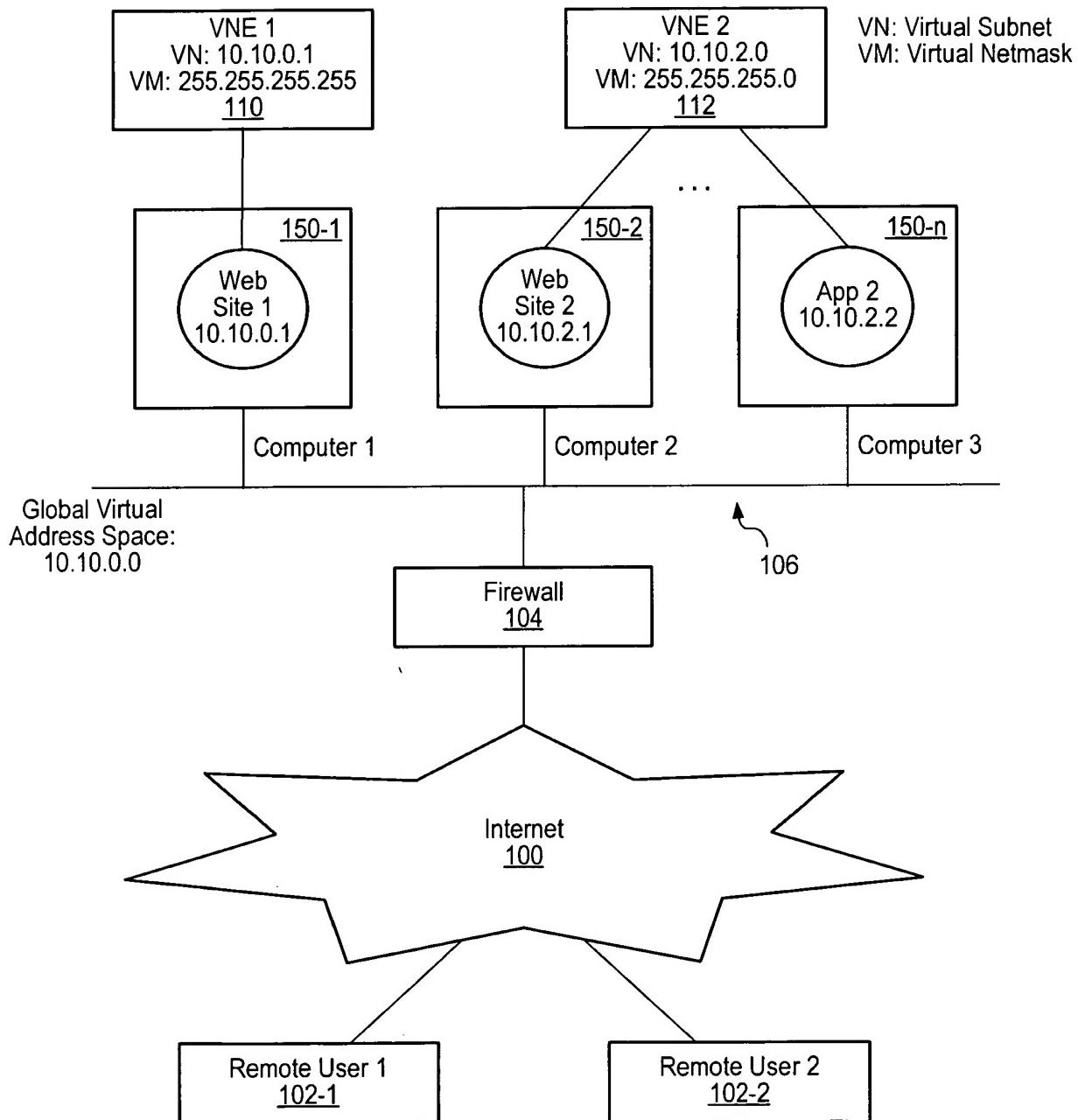


*Replacement Sheet*

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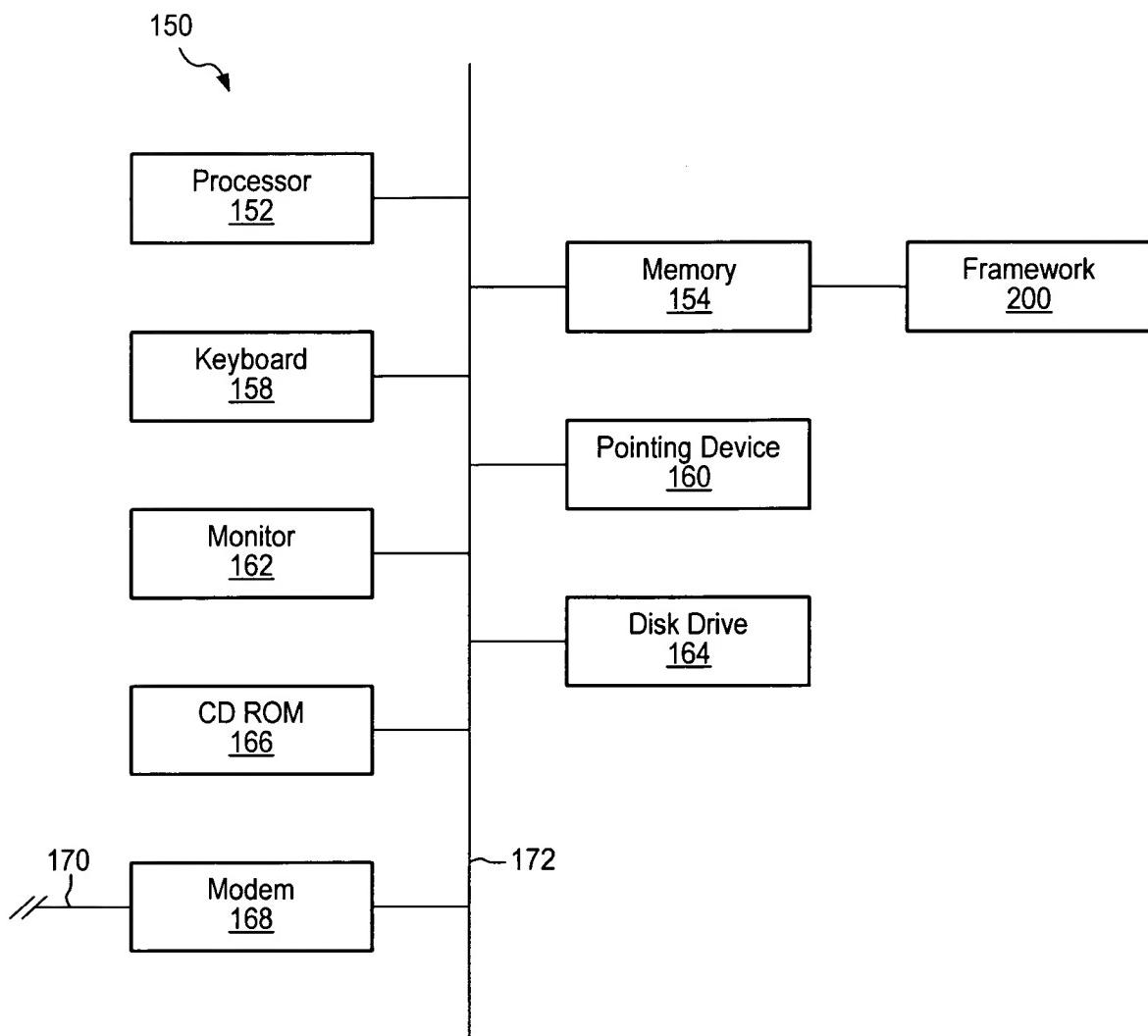


The above diagram illustrates the virtual network environments. Virtual Network Environment 1 contains one application WEB SITE 1, is defined by the Virtual Network Address 10.10.0.1 resides solely on computer 1. Virtual Network Environment 2 contains two applications, WEB SITE 2 and APP 2, and spans two computers, Computer 2 and Computer 3. The virtual network of VNE 2 is 10.10.2.0.

*Fig. 1*

*Replacement Sheet*

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*Fig. 2*

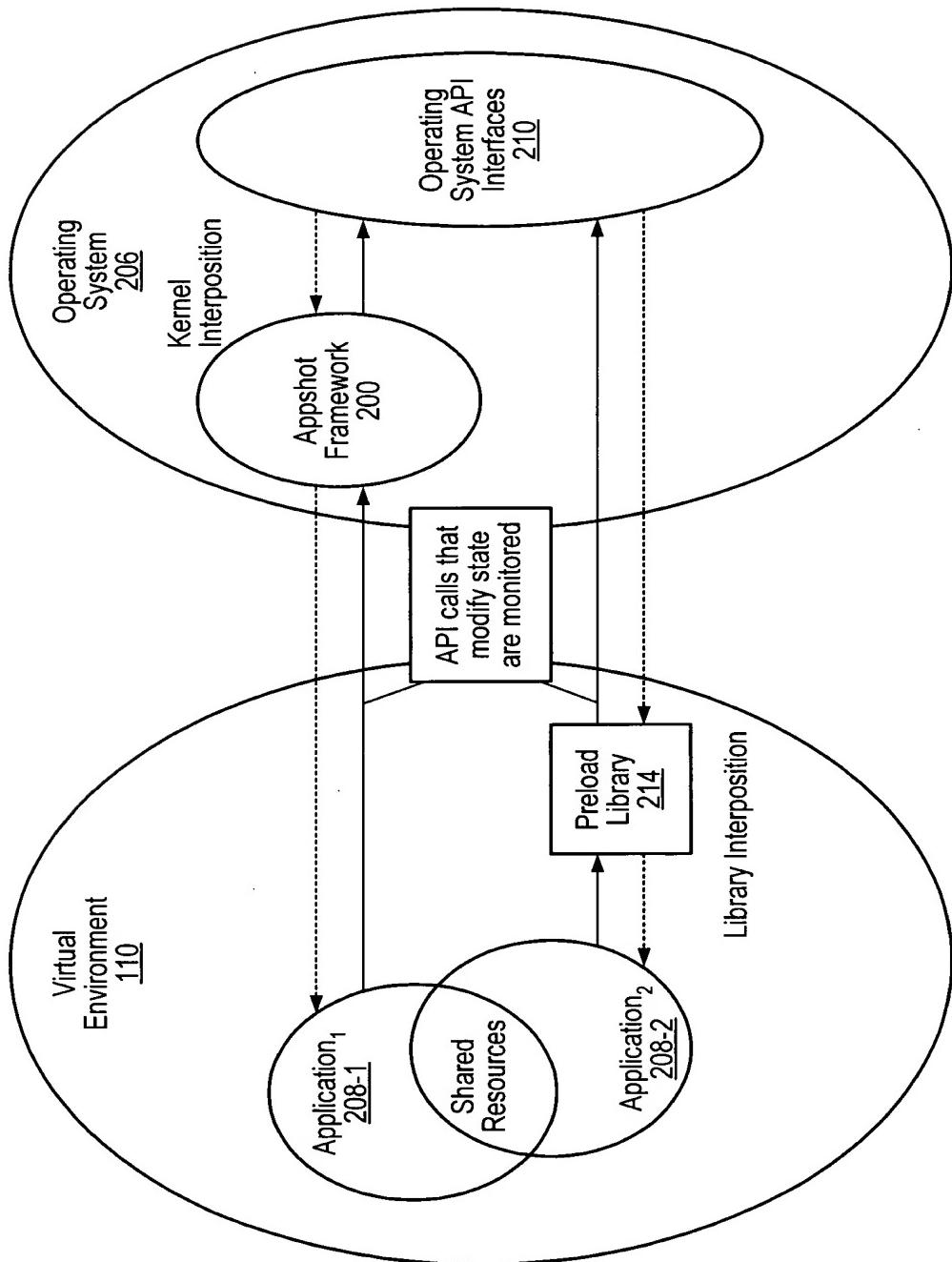
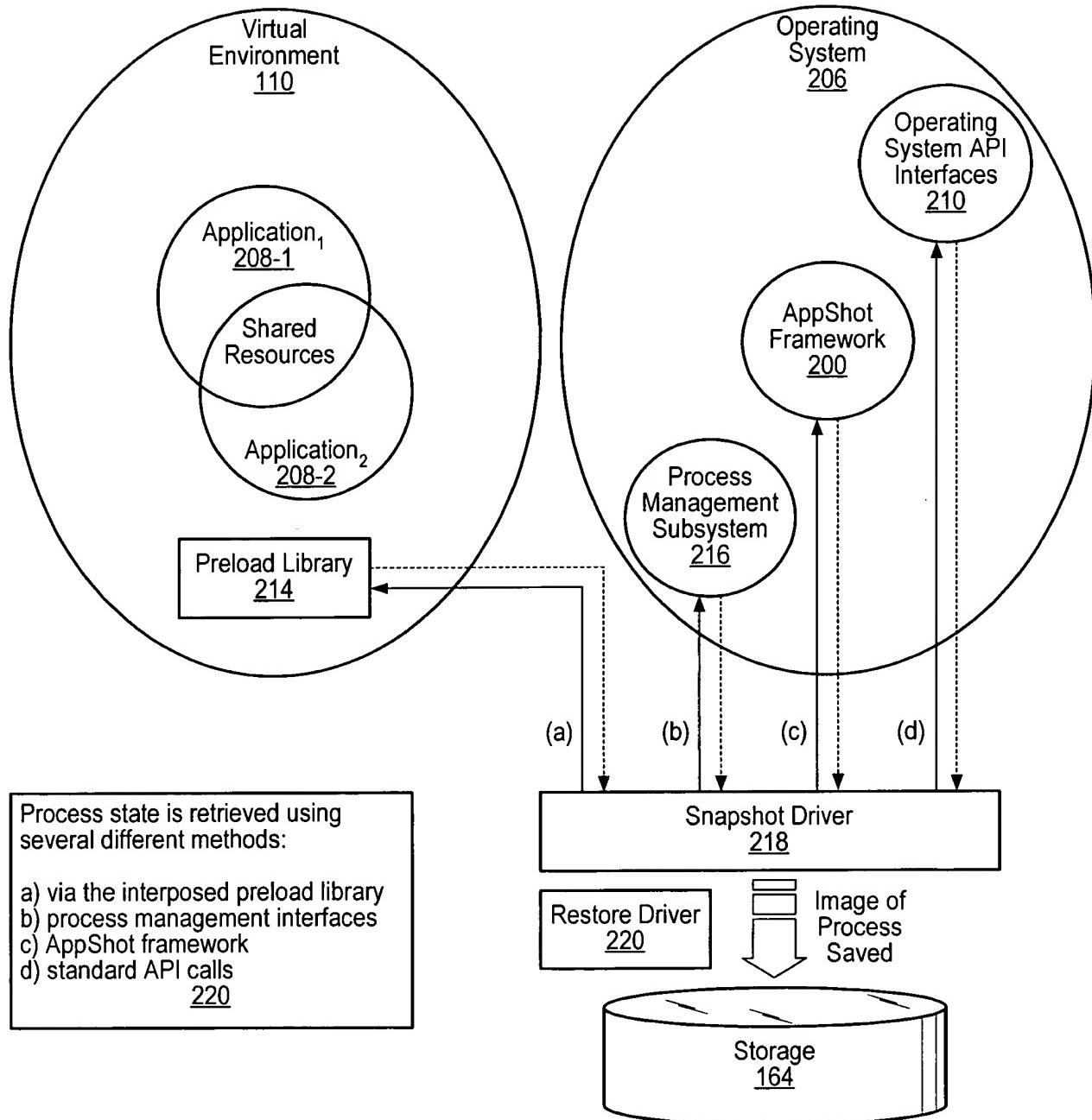


Fig. 3

Tracking application state via library and kernel interposition.



Process state is retrieved using several different methods:

- via the interposed preload library
  - process management interfaces
  - AppShot framework
  - standard API calls
- 220

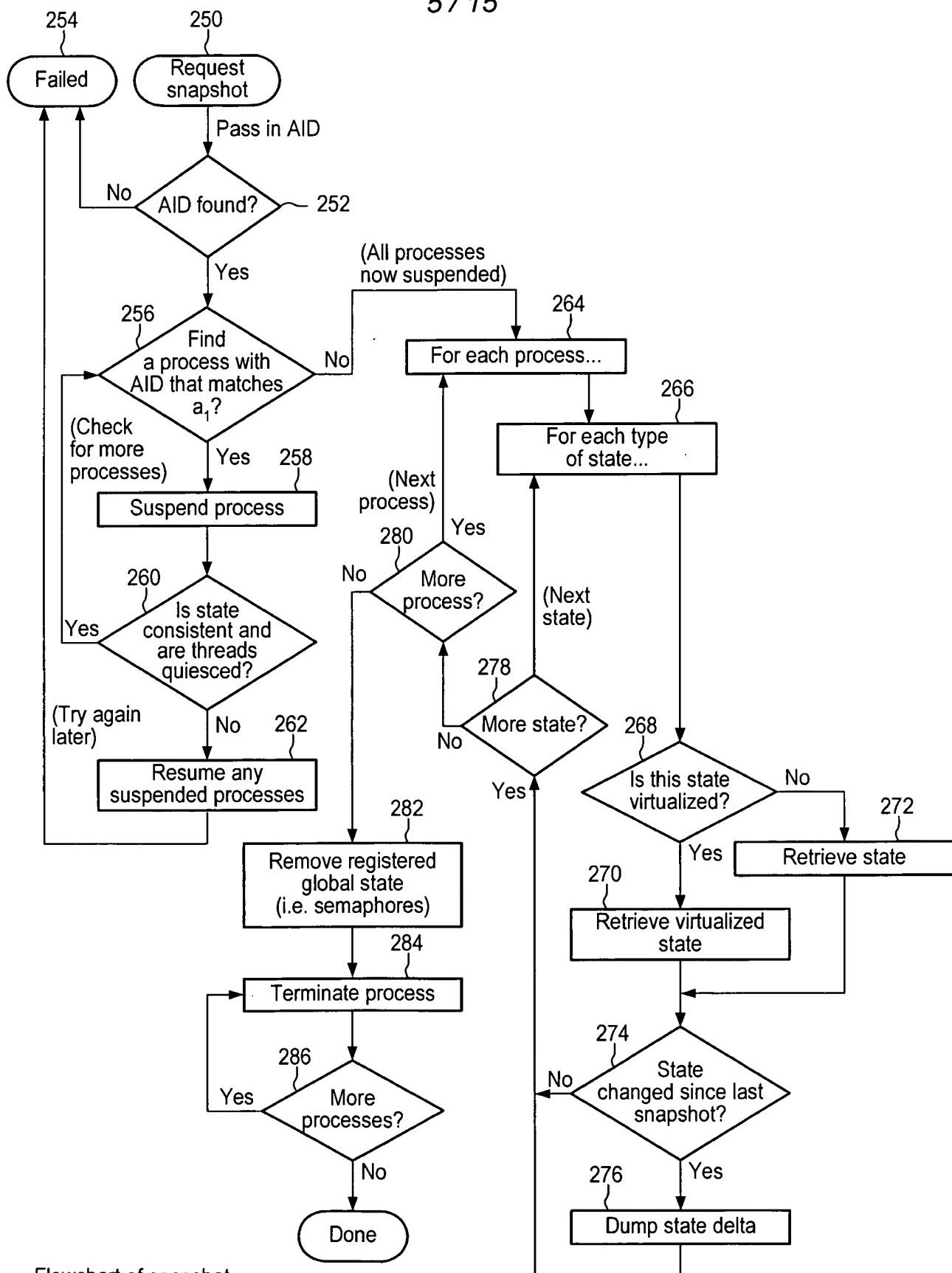
Capture of an application's run-time state.

Fig. 4



## Replacement Sheet

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Flowchart of snapshot.

*Fig. 5*



## Replacement Sheet

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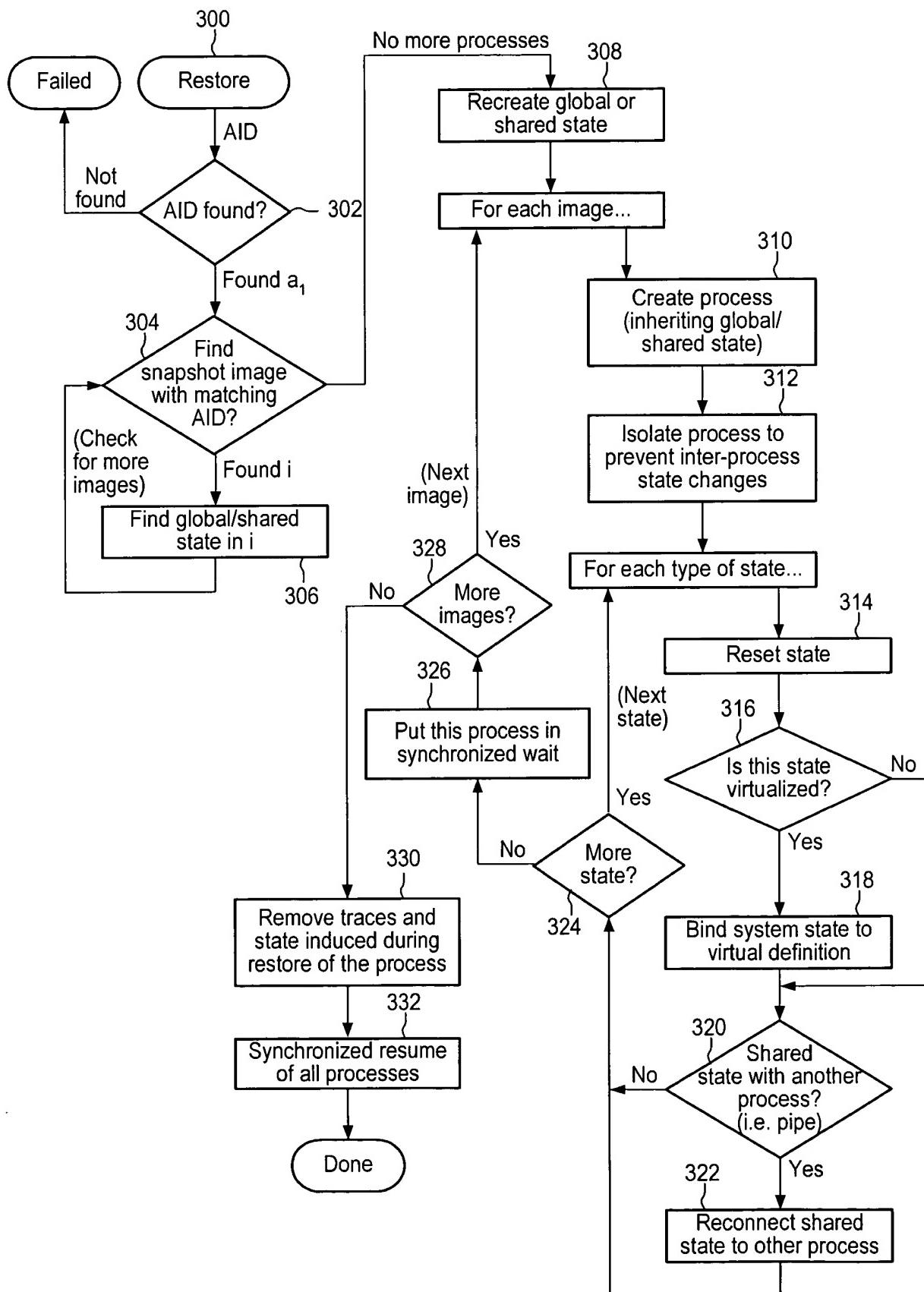


Fig. 6



## Replacement Sheet

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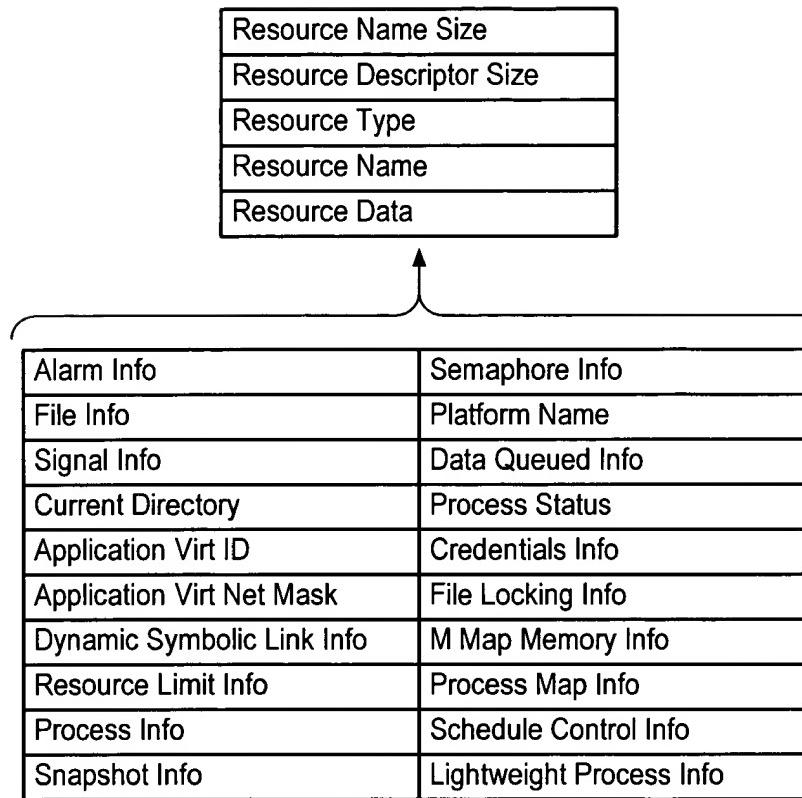
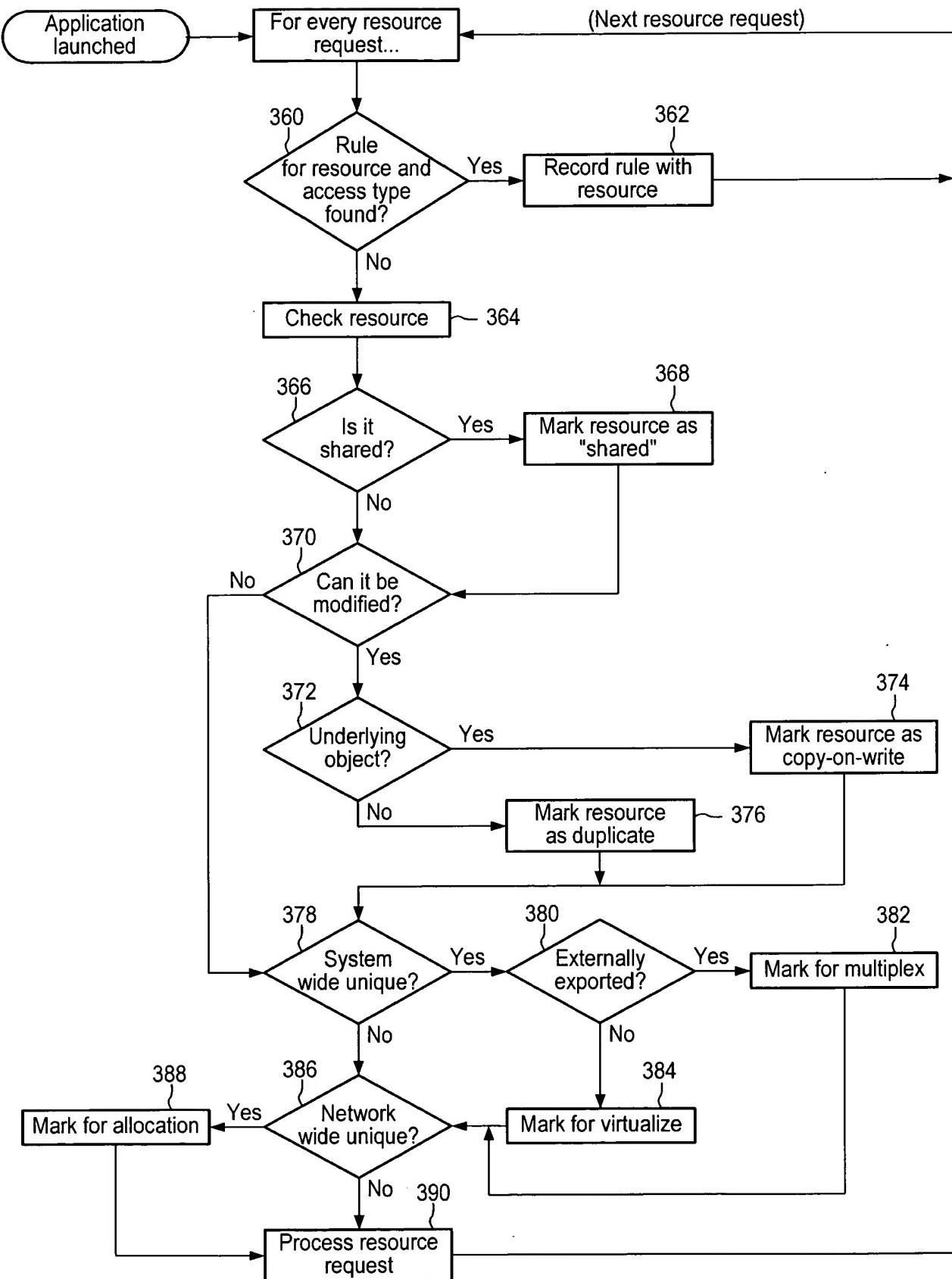


Fig. 7



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*Fig. 8*

*Replacement Sheet*

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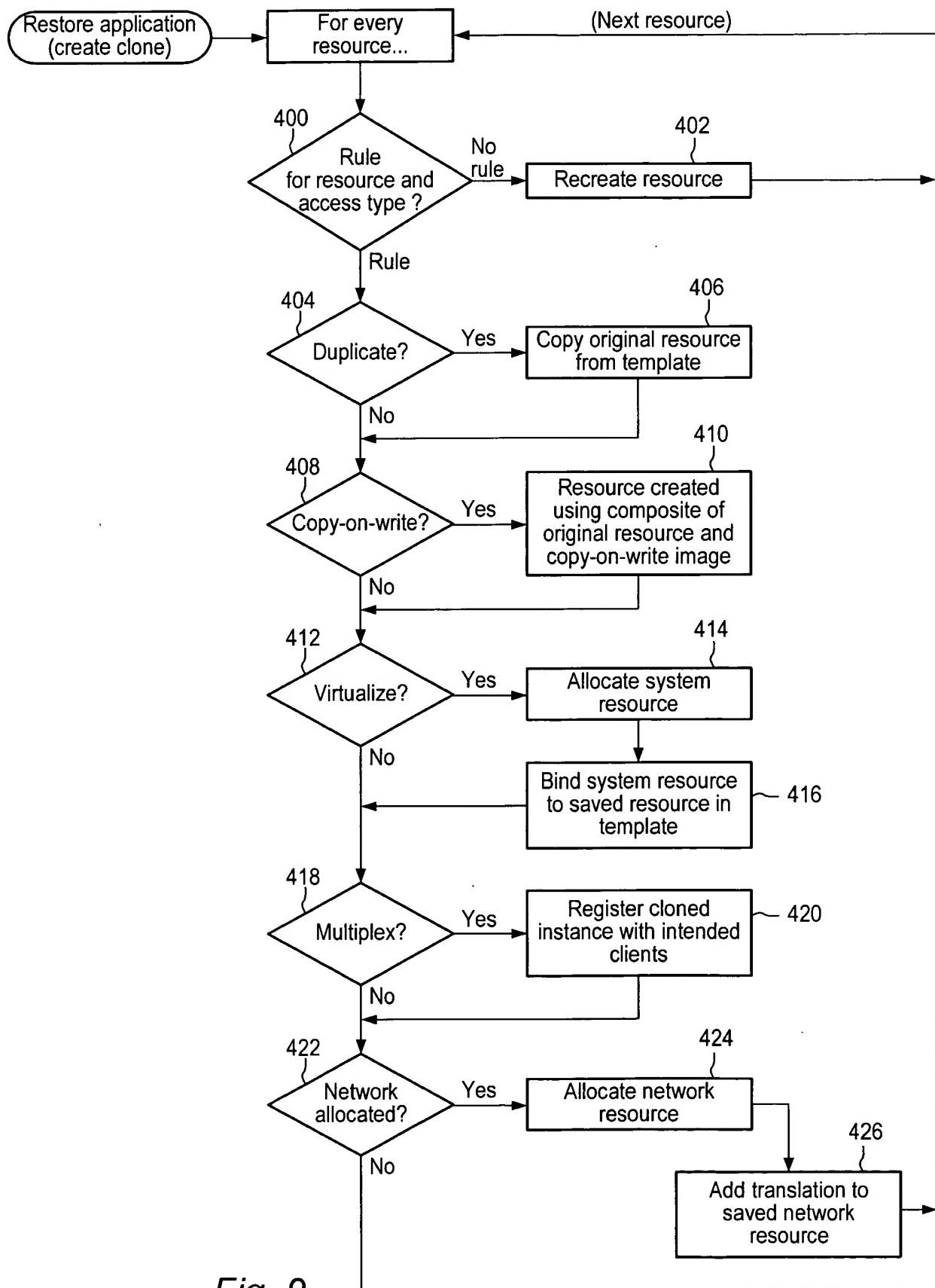
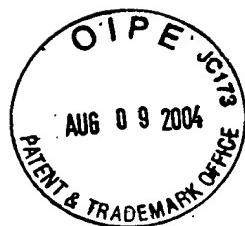
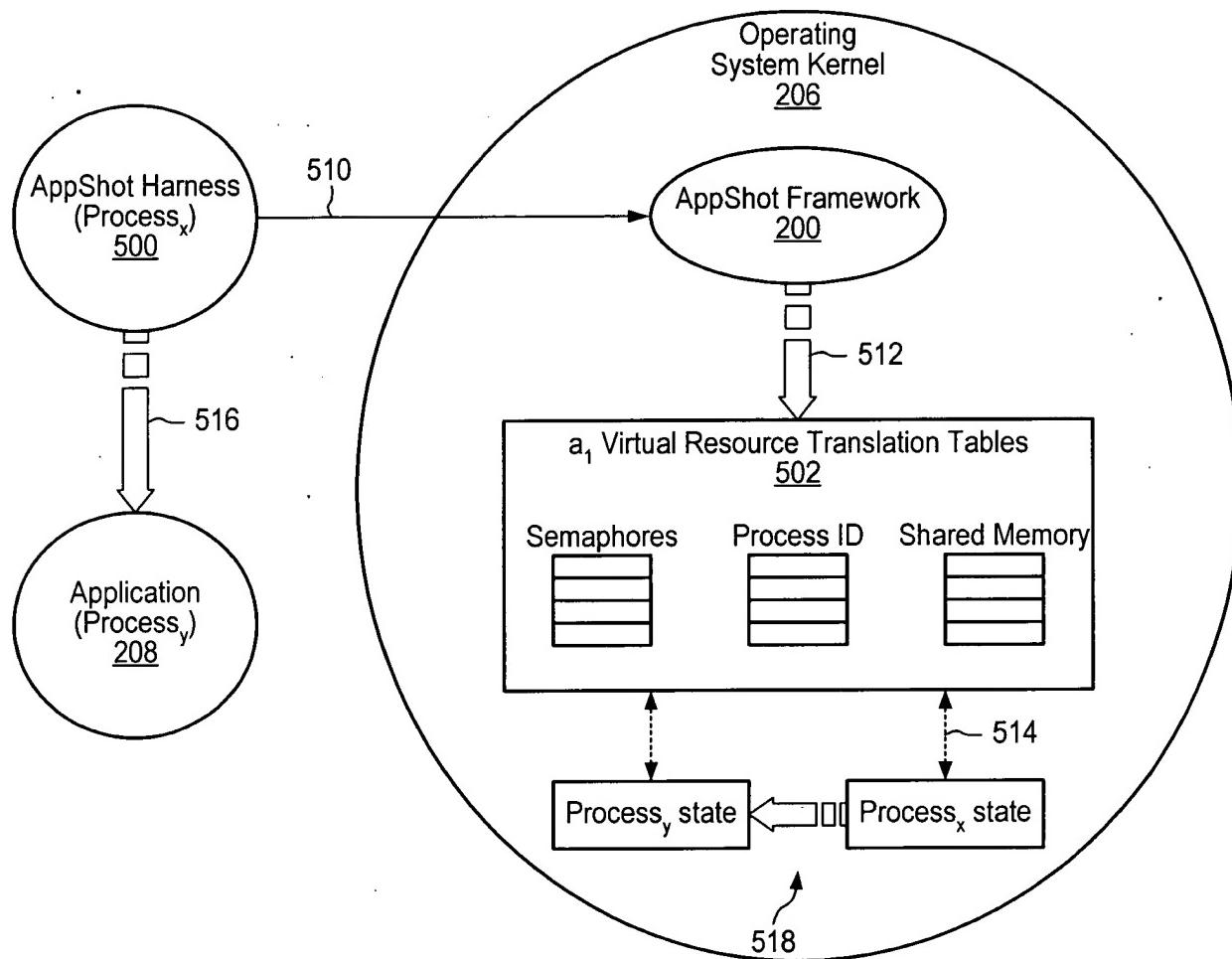


Fig. 9



## Replacement Sheet

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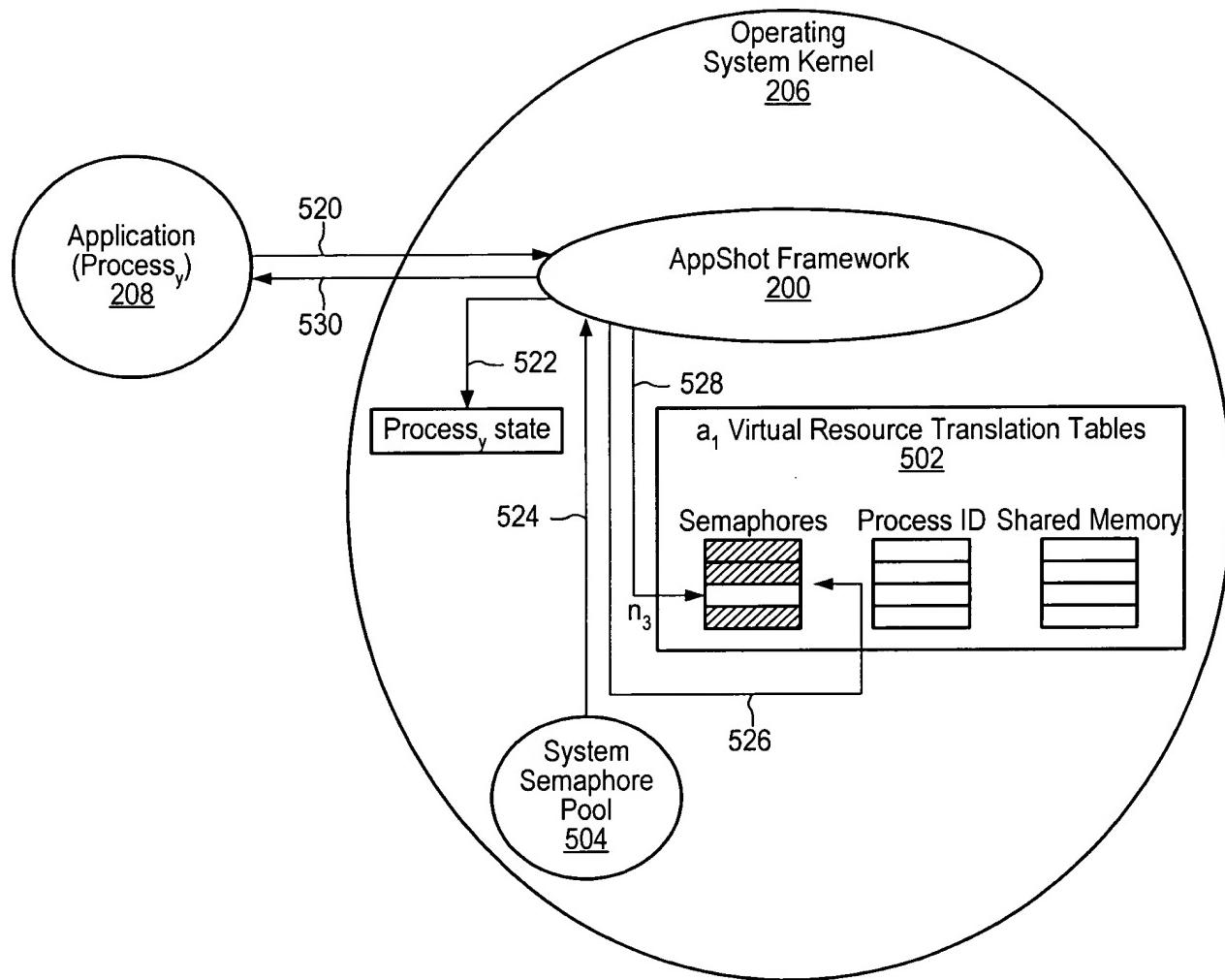
Registration of an application using virtual resource ID's

Fig. 10



## Replacement Sheet

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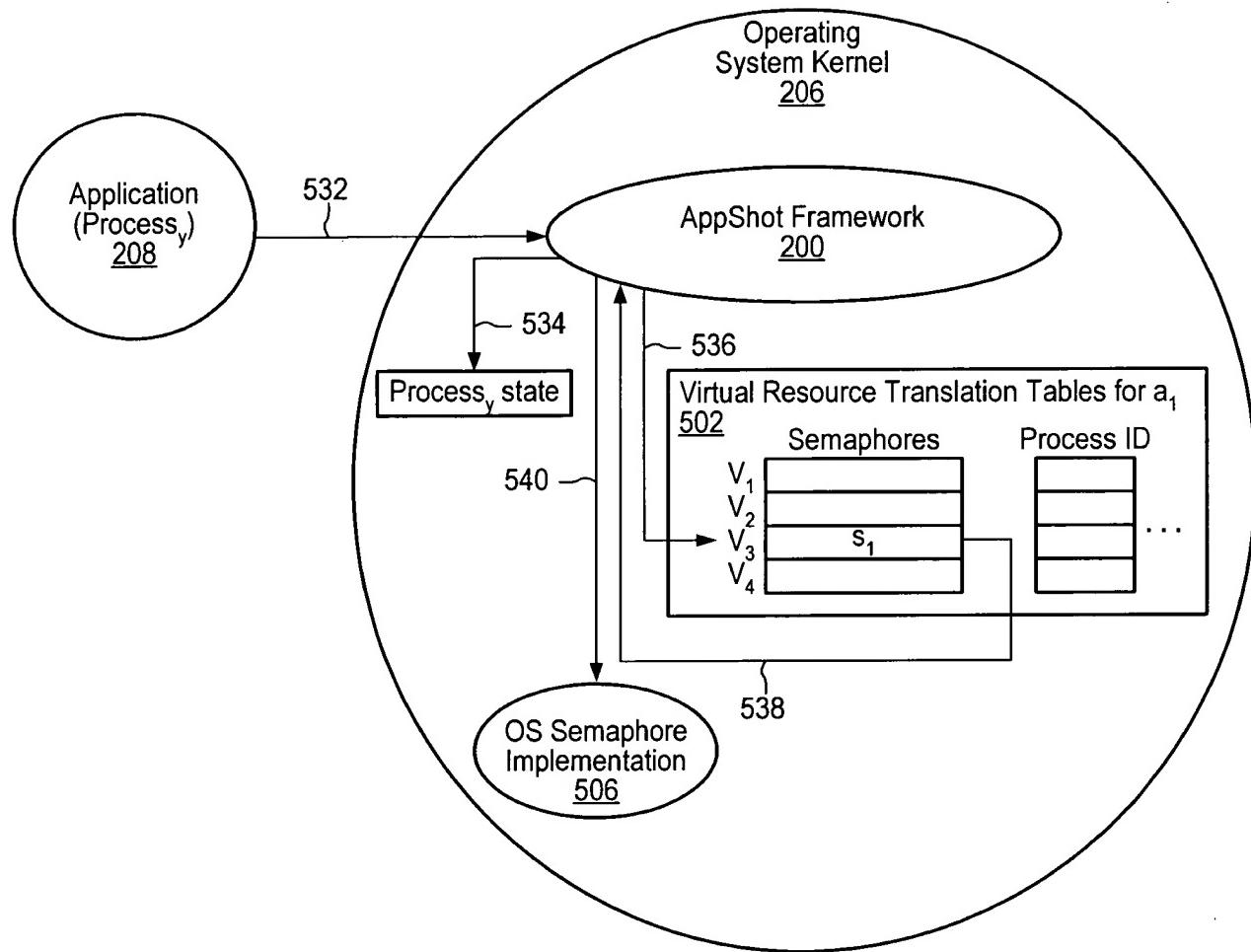
Allocation of a virtual resource (i.e. semaphore)

Fig. 11



## Replacement Sheet

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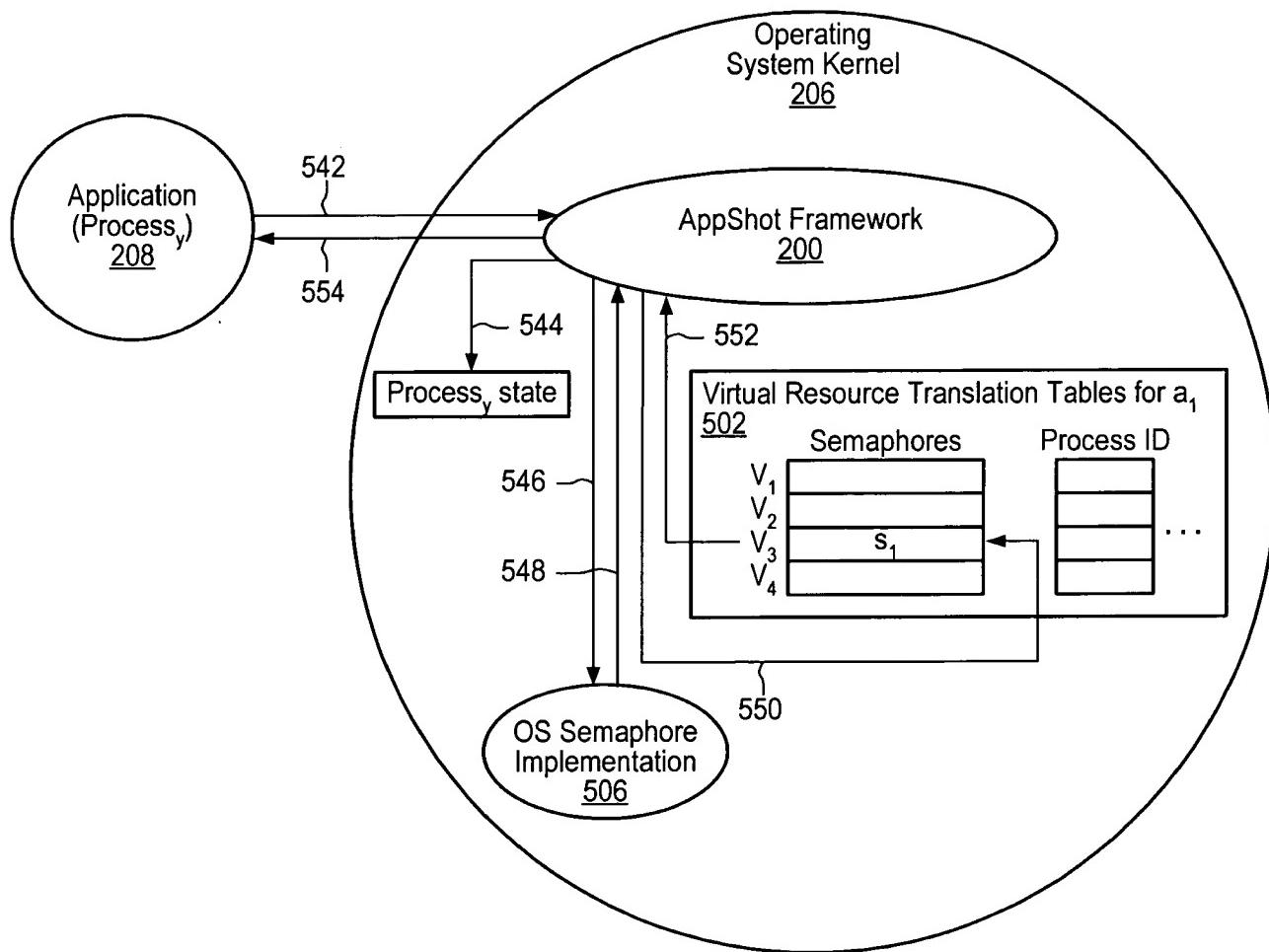
Translation of a virtual resource (i.e. semaphore), virtual to system

Fig. 12



## Replacement Sheet

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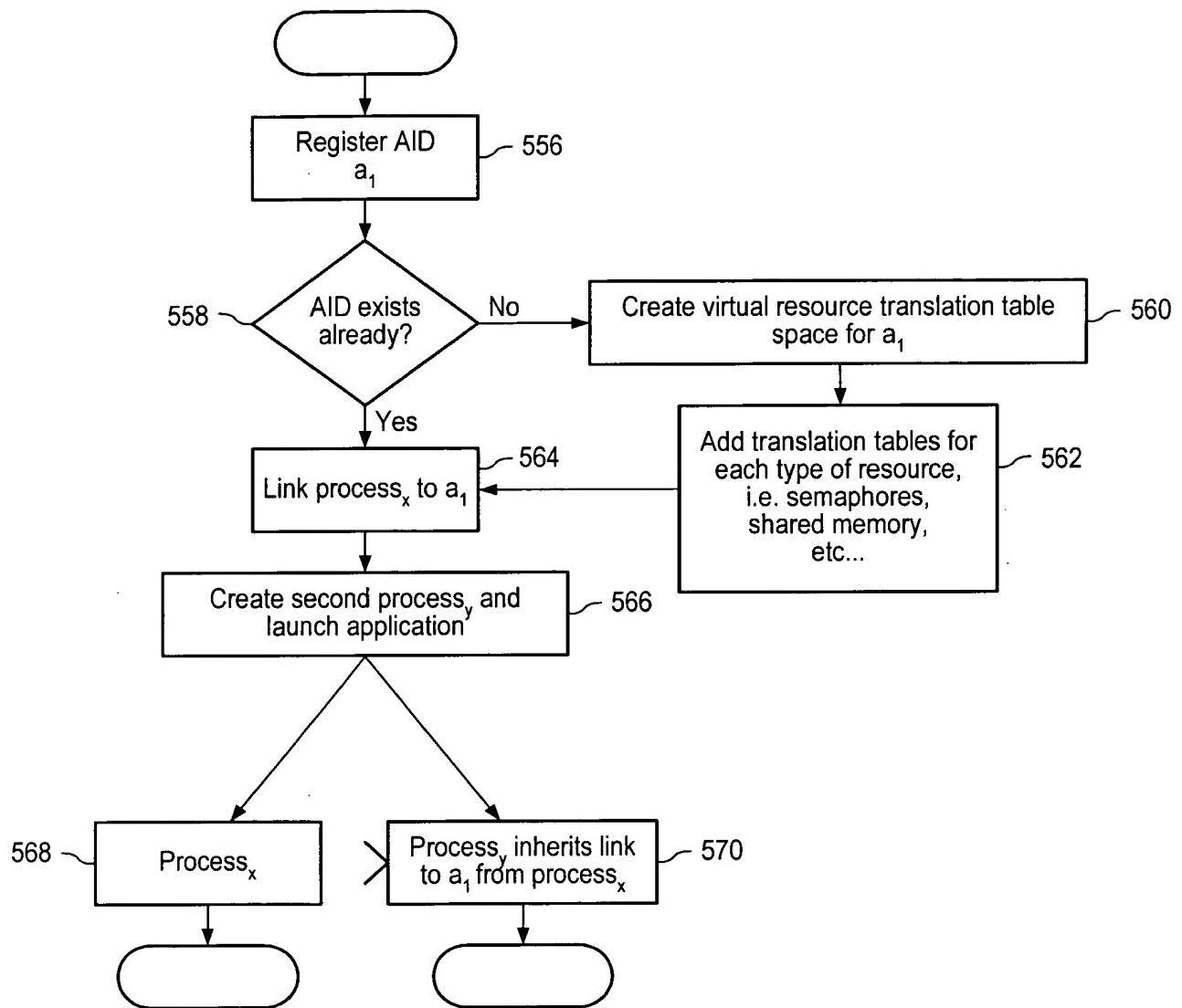
Translation of a virtual resource (i.e. semaphore), system to virtual

Fig. 13



## Replacement Sheet

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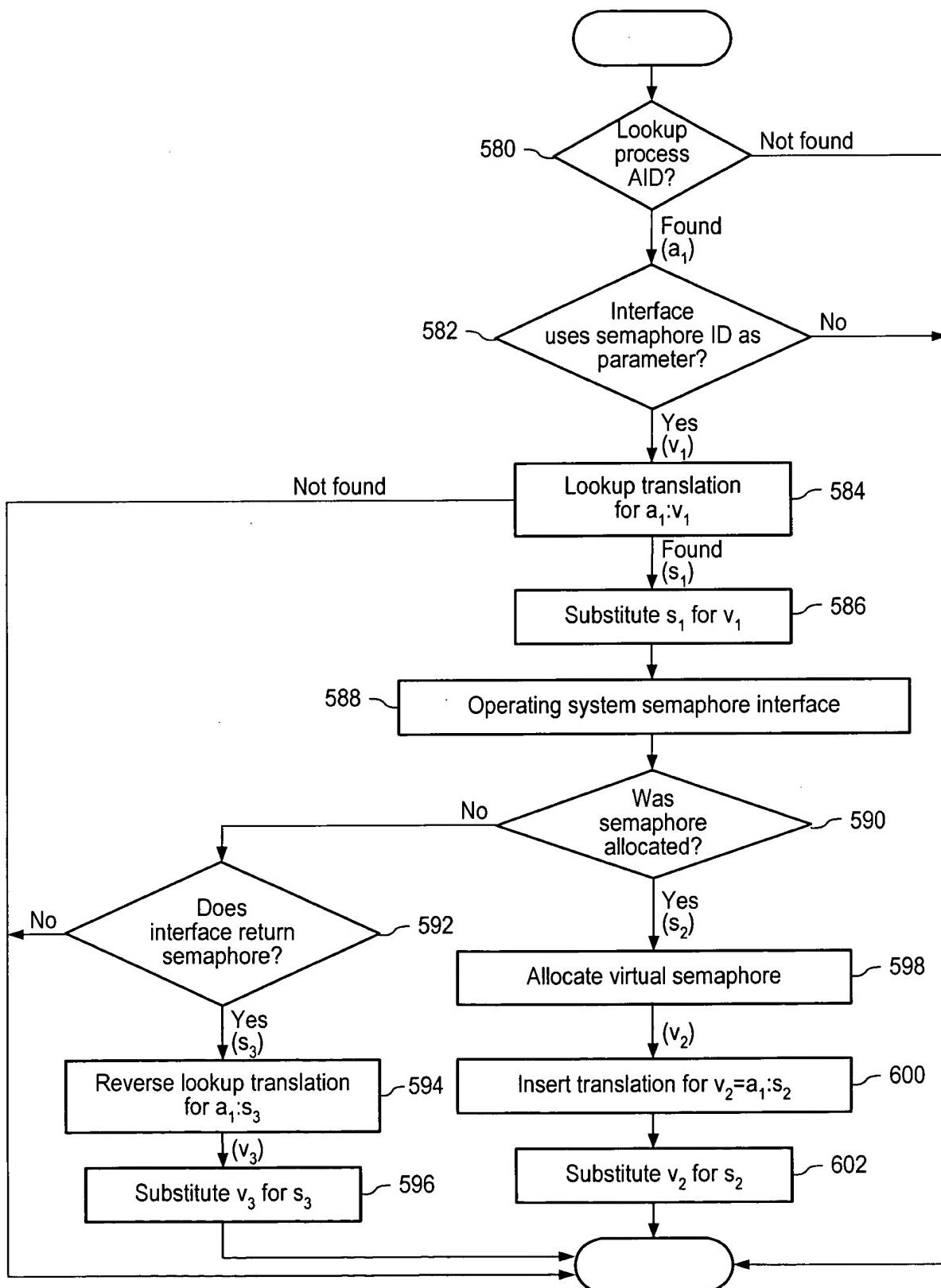
Flowchart describing creation of virtual translation tables

*Fig. 14*



## Replacement Sheet

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Flowchart depicting translation of a virtual resource (i.e. semaphore)

*Fig. 15*